

WHAT IS CLAIMED IS:

1. A method for routing calls in a distributed mobile switching center environment, the method comprising:

receiving a call to be routed from a first switching node to a second switching node;

identifying an inter-switch route for the call from the first switching node to the second switching node, the inter-switch route including an intermediate switching node, wherein the intermediate switching node includes a plurality of media gateways;

selecting an intra-switch route within the intermediate switching node from a plurality of intra-switch routes within the intermediate switching node for establishing the inter-switch route, each of the plurality of intra-switch routes including at least one interconnection between media gateways; and

connecting the call using the identified inter-switch route and the selected intra-switch route.

2. The method of claim 1 wherein identifying the inter-switch route comprises selecting the inter-switch route from a list of inter-switch routes for use with calls to be routed from the first switching node to the second switching node.

3. The method of claim 1 further comprising:

determining an availability of the identified inter-switch route; and

determining an availability of the at least one interconnection of the selected intra-switch route.

4. The method of claim 1 further comprising determining an unavailability of a candidate intra-switch route based on an unavailability of at least one interconnection, wherein selecting the intra-switch route is performed in response to determining the unavailability of the candidate intra-switch route.

5. The method of claim 1 wherein selecting an intra-switch route comprises selecting the intra-switch route from a list of intra-switch routes associated with the identified inter-switch route, the list of intra-switch routes including the plurality of intra-switch routes.

6. The method of claim 1 wherein the intermediate switching node is associated with a plurality of trunks, at least one of the plurality of trunks connecting the intermediate switching node to the first switching node and at least one of the plurality of trunks connecting the intermediate switching node to the second switching node, and each interconnection comprising an interconnection between media gateways.

7. The method of claim 1 wherein selecting the intra-switch route comprises selecting the intra-switch according to a selection algorithm.

8. The method of claim 1 further comprising translating a received directory number for the call, the received directory number for use in selecting the list of inter-switch routes.

9. The method of claim 1 wherein the plurality of media gateways are operable to handle bearer traffic, each of the plurality of media gateways operating under control of a server using signaling traffic associated with the bearer traffic.

10. A telecommunications system comprising:
a first switching node; and
a second switching node comprising a distributed mobile switching center
including:

a plurality of media gateways, at least one media gateway having a trunk connection with the first switching node; and

a server operable to control routing for the plurality of media gateways, the server operable to select, for a call connection, an intra-switch route including a first media gateway, a second media gateway, and at least one interconnection for connecting the first media gateway and the second media gateway, the intra-switch route selected from a plurality of intra-switch routes designated for serving call connections routed through the first switching node and the second switching node.

11. The telecommunications system of claim 10 wherein the plurality of intra-switch routes are included in an interconnection route list designating a set of possible intra-switch routes from the first media gateway to the second media gateway.

12. The telecommunications system of claim 10 wherein the first switching node comprises a destination switching node, the server of the second switching node identifying an external route from a list of external routes between the first switching node and the second switching node.

13. The telecommunications system of claim 10 wherein the first switching node comprises an origination switching node for the call connection destined for a third switching node, the first switching node operable to select an inter-switch route from a list of routes for routing call connections from the first switching node to the third switching node, the selected inter-switch route including the second switching node, and the server operable to select the intra-switch route in response to a message from the first switching node.

14. The telecommunications system of claim 11 wherein the server selects the intra-switch route based on a selection algorithm defining a sequence in which the plurality of intra-switch routes are selected from the interconnection route list.

15. The telecommunications system of claim 14 wherein the selection algorithm includes at least one restriction for selectively preventing use of an intra-switch route based on data relating to the call connection.

16. The telecommunications system of claim 10 wherein the server is operable to identify an unavailability of a circuit in an initially selected intra-switch route and, in response to identifying the unavailability, to select an alternate intra-switch route and that uses a different circuit on the initially selected intra-switch route or a different intra-switch route having at least one alternate interconnection.

17. The telecommunications system of claim 10 wherein the at least one interconnection comprises a plurality of circuits for handling bearer traffic in at least one direction, the interconnection having an associated continuity testing attribute.

18. The telecommunications system of claim 10 wherein the server handles signaling traffic for the distributed mobile switching center and the plurality of media gateways handle bearer traffic for the distributed mobile switching center.

19. An article comprising a machine-readable medium storing instructions for causing data processing apparatus to:

receive data indicating a call to be routed from a first switching node to a second switching node through an intermediate switching node, the intermediate switching node having a plurality of geographically distributed media gateways connected by interconnections;

identify a first media gateway and a second media gateway of the plurality of geographically distributed media gateways for use in routing the call from the first switching node to the second switching node;

identify an interconnection route list corresponding to a routing between the first media gateway and the second media gateway, the interconnection route list having a plurality of different interconnection routes between the first media gateway and the second media gateway;

determine an availability of at least one of the different interconnection routes;

select an available one of the different interconnection routes; and

allocate the selected interconnection route for use in routing the call from the first switching node to the second switching node.

20. The article of claim 19 wherein the second media gateway is identified from an external route list having a plurality of external routes, each external route providing a possible route between the intermediate switching node and another switching node for use in routing the call from the first switching node to the second switching node.